



2012-13

Missouri Deer Population Status Report & Deer Season Summary



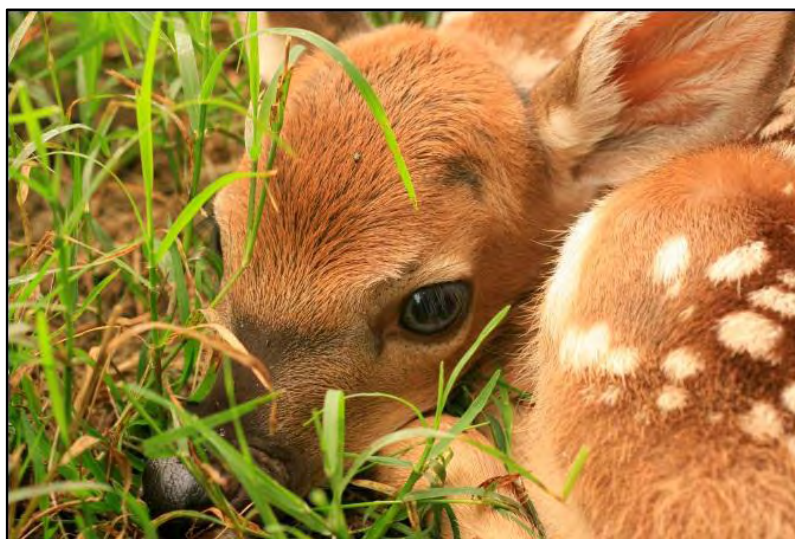
Missouri Department of Conservation

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2012 Overview

The 2012 total deer harvest of 309,929 was a 7% increase from 2011 making it the third largest on record and the highest total harvest since 2006. The 2012 deer archery harvest was a record for Missouri. Although statewide harvest totals were up, harvest greatly varied among regions. Harvest increased substantially in southern Missouri, but decreased in northern Missouri. In southern Missouri, poor acorn production coupled with slowly growing populations in this area has increased statewide harvest totals the last few years. However, northern, western, and parts of central Missouri are experiencing long-term declines in deer populations resulting from liberalization of antlerless deer harvest opportunities and implementation of the antler-point restriction. As deer populations decline, deer harvests required to reduce or stabilize deer population decreases in some parts of Missouri, as high doe harvest is no longer necessary.

The 2012 hemorrhagic disease outbreak was likely the most widespread and intense outbreak documented in Missouri, as all counties reported suspected cases. From June to December 2012 there were 10,177 reports of deer with suspected hemorrhagic disease. Commonly, the full impact of an outbreak at the population level is normally expressed 2-3 years following an outbreak. When harvest is added to the hemorrhagic disease mortality, a greater proportion of deer are removed from the population thus leading to population declines. The population effects may have been intensified due to the record low acorn crop, making deer more vulnerable to harvest in heavily forested areas. Alternatively, in some areas where local harvest rates are typically low the additional HD mortality will have little effect on long-term population size.

Chronic wasting disease (CWD) management efforts to limit the prevalence and further spread of CWD in the free-ranging white-tailed deer population continued in north-central Missouri. In the CWD Containment Zone (composed of Chariton, Linn, Macon, Randolph, Sullivan, and Adair counties) management efforts included sampling of hunter harvested deer, removal of the antler-point restriction, prohibiting the placement of consumable attractants for deer (e.g., feed, corn, minerals, salt, etc.), and harvest liberalizations. Additionally, MDC has continued statewide CWD testing of hunter harvested deer. As of March 2013, testing has detected 10 free-ranging and 11 captive CWD-positive white-tailed deer.

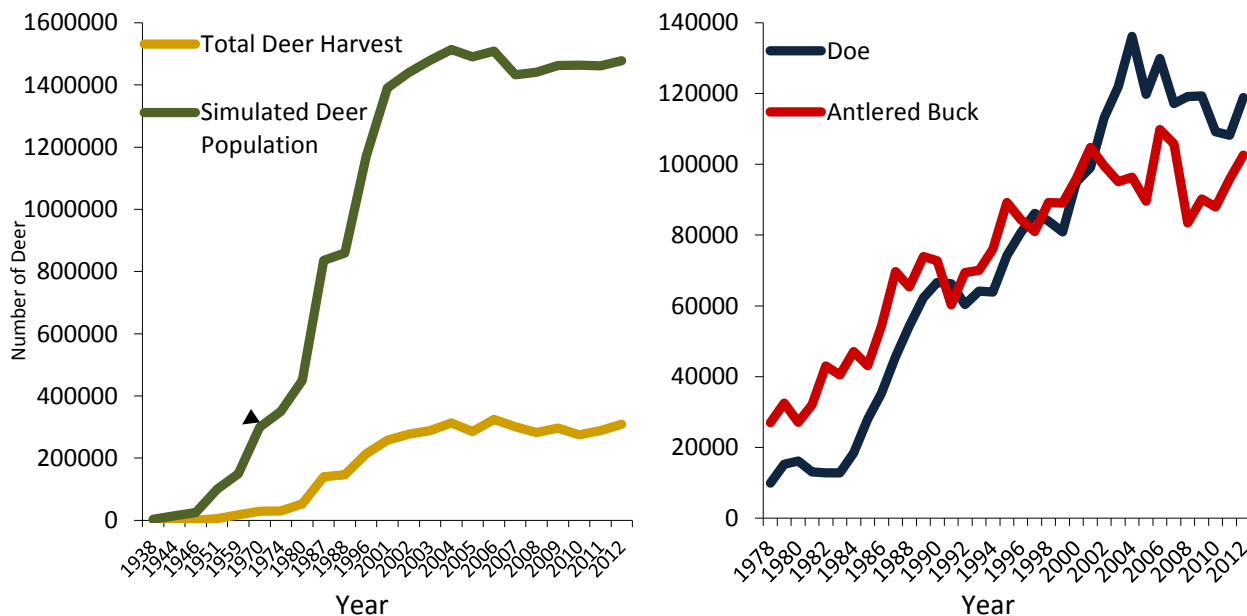


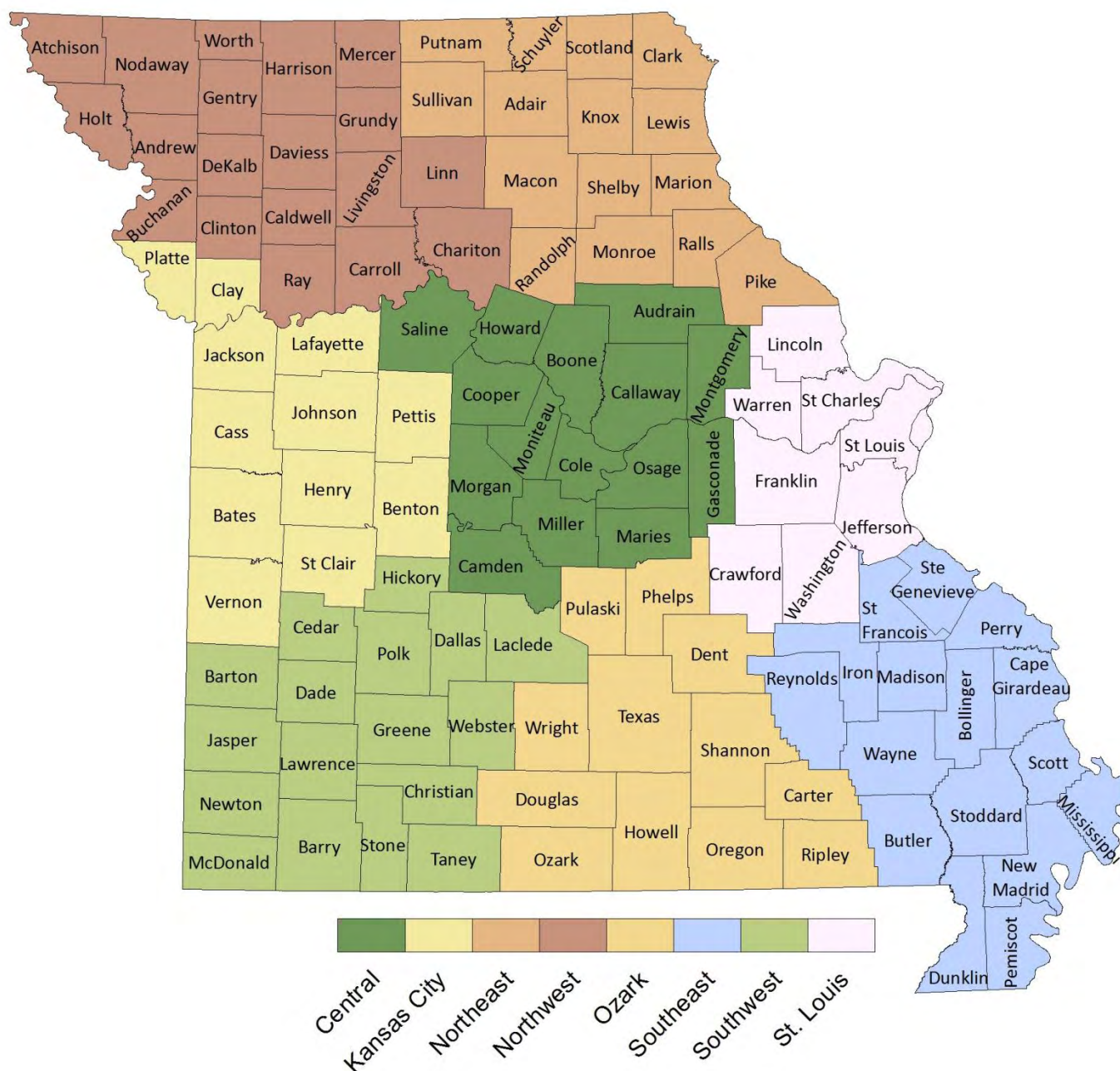
Figure 1. Statewide estimated deer population and total deer harvest from 1938 to 2012 (left). Number of antlered bucks and does in the statewide deer harvest from 1978 to 2012 (right).

Regional Deer Population Trends

Statewide deer population trends do have importance; however, a more accurate assessment of local conditions is revealed by reviewing regional trends. For example, the statewide deer harvest total may appear stable but further evaluation of regional trends may show increasing, or decreasing harvest.

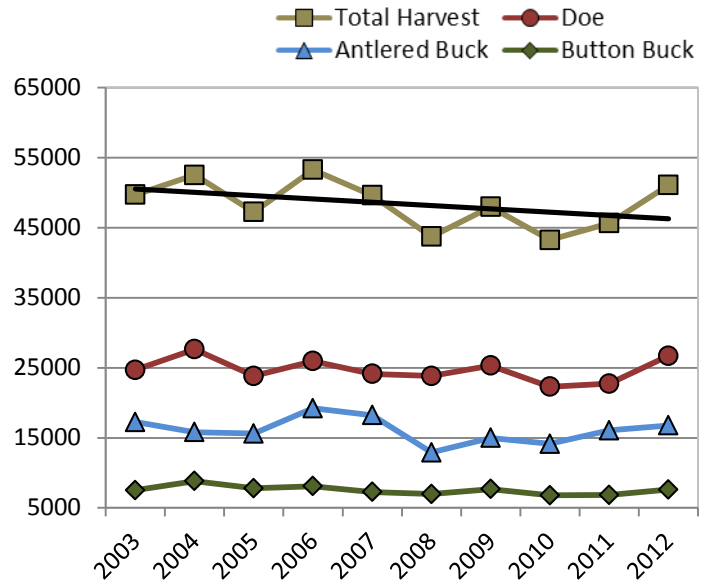
Regional differences in deer harvest can be attributed to a variety of factors including changing deer populations, acorn abundance, and hemorrhagic disease.

Regional information is more indicative of deer population trends. However, there can be considerable variation among the counties within a region and within a county itself. Therefore, regional information should be considered as a starting point when evaluating deer populations within a localized area.



Central Region (Audrain, Boone, Callaway, Camden, Cole, Cooper, Gasconade, Howard, Maries, Miller, Moniteau, Montgomery, Morgan, Osage, Saline)

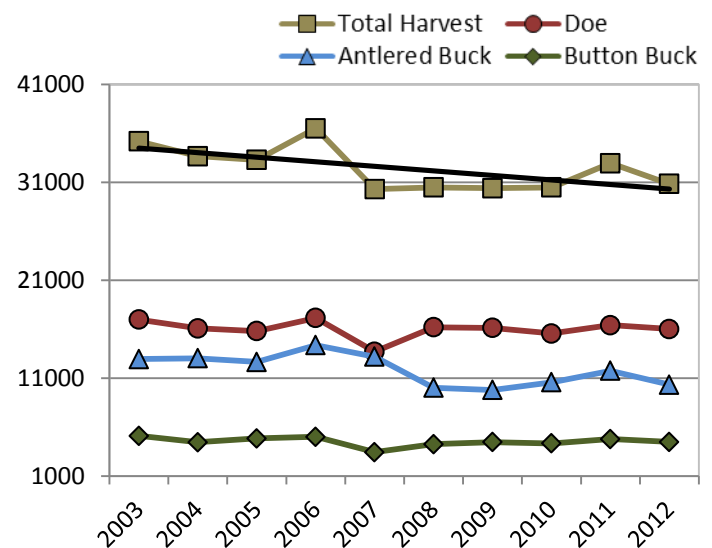
Deer populations vary greatly across the Central Region. The northern counties (Audrain, Howard, Boone, Saline, Cooper) within this region have had significant deer population and harvest declines in the last decade as a result of multiple hemorrhagic disease outbreaks and high doe harvest. The poor acorn crop boosted deer harvest in many parts (Cole, Camden, Miller, Gasconade, Maries, Morgan) of the Central Region, increasing by 12% from 2011 and 6% greater than the 10-year average. Osage, Boone, and several other counties in the Central Region were hit hard by hemorrhagic disease in 2012 and some of the same areas were also affected in 2007. Therefore, it is expected that localized areas will have smaller deer populations over the next several years. A reduction in doe harvest in some central Missouri counties will be necessary to overcome significant deer population declines that occurred over the last several years.



Harvest & Survey Info	Stats
Doe : Buck Harvest Ratio	1.59
# Trips Per Deer Killed (2011)	9.4

Kansas City Region (Bates, Benton, Cass, Clay, Henry, Jackson, Johnson, Lafayette, Pettis, Platte, St. Clair, Vernon)

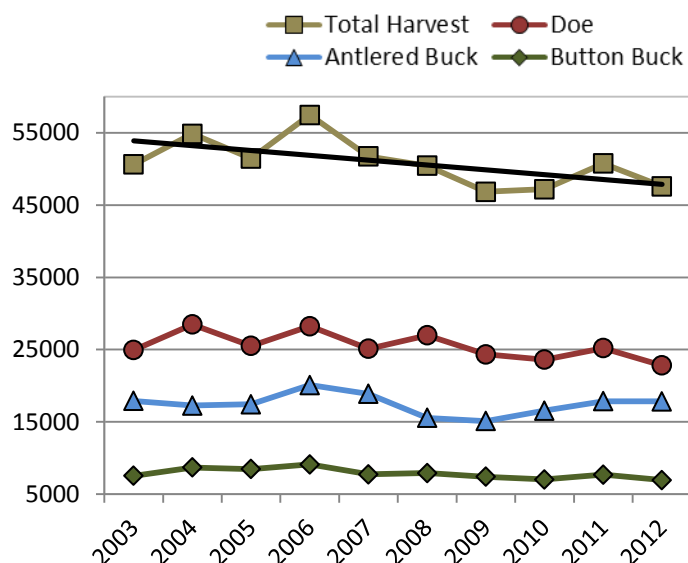
Deer populations within the Kansas City Region have been stable to decreasing over the last decade. Harvest in the Kansas City Region in 2012 was down 6% from 2011 which follows a general trend of reduced harvest across the Kansas City Region over the last decade. Counties with the greatest decrease in 2012 harvest compared to the 10-year average were Platte, Bates, and Pettis, while Benton County increased. Doe harvest across the region has remained relatively stable over the last 10 years. Buck harvest has slowly decreased as a result of implementation of the antler point restriction in 2008 but has slowly increased since then with the exception of 2012. A large portion of the region was hit hard by hemorrhagic disease in 2012 with Benton and Henry counties having the most reported cases of HD suspected deer deaths within the region. In the rural portions of the region affected by hemorrhagic disease, it may be necessary to reduce doe harvest to allow deer populations to recover.



Harvest & Survey Info	Stats
Doe : Buck Harvest Ratio	1.55
# Trips Per Deer Killed (2011)	9.8

Northeast Region (Adair, Clark, Knox, Lewis, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby, Sullivan)

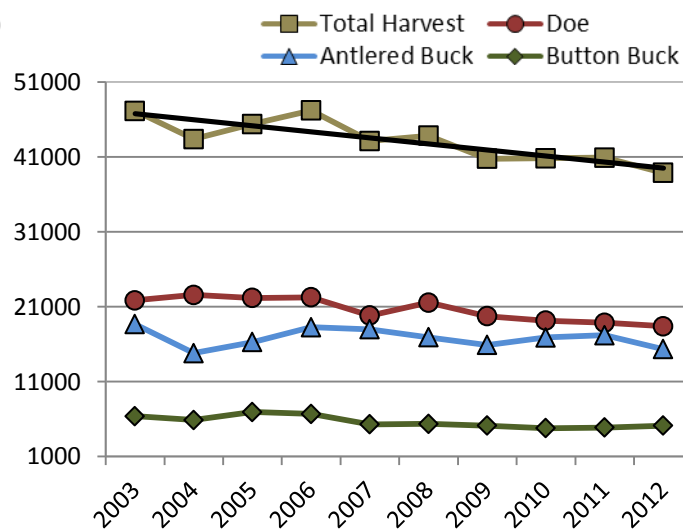
Deer populations in the Northeast Region have been slowly decreasing over the last several years; however, some areas remain with high deer populations. Several areas within the Northeast Region experienced significant hemorrhagic disease mortality which likely contributed to the 6% decrease in deer harvest from 2011. In general, deer populations in many parts of the Northeast Region have been stable to slightly increasing including Adair, Macon, Lewis, Putnam, Sullivan, Clark, and Schuyler counties. Some counties have experienced declines with the most dramatic being in Monroe and Shelby. However, this year's hemorrhagic disease outbreak will result in some localized reductions in deer populations. Areas hit hard by hemorrhagic disease in 2012 may have fewer deer over the next few years. Localized decreases in doe harvest, without regulation changes, should be sufficient to allow recovery of populations reduced by hemorrhagic disease mortality. However, we will closely monitor populations in the Northeast Region over the next couple of years to assess the impacts of the 2012 HD outbreak.



Harvest & Survey Info	Stats
Doe : Buck Harvest Ratio	1.28
# Trips Per Deer Killed (2011)	6.8

Northwest Region (Andrew, Atchison, Buchanan, Caldwell, Carroll, Chariton, Clinton, Daviess, Dekalb, Gentry, Grundy, Harrison, Holt, Linn, Livingston, Mercer, Nodaway, Ray, Worth)

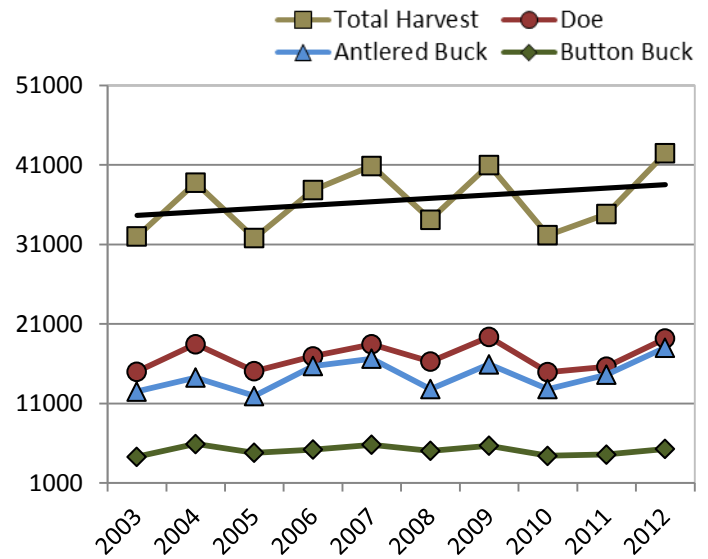
There has been a steady reduction in the deer population and harvest over the last decade in the Northwest Region with harvest in 2012 decreasing by 10% from the 10-yr average. Declining harvest is a reflection of lower deer populations across many counties, including Atchison, Nodaway, Ray, Carroll, Clinton, and Daviess. Large concentrations of deer are far less common today than in the early 2000's in these areas. Since many parts of the Northwest Region were heavily impacted by hemorrhagic disease in 2012, there are concerns about further reductions in the region's deer population. In areas where landowners and hunters have noticed decreasing deer populations, a reduction in doe harvest is likely warranted to aid population recovery. However, a few counties, including Worth and Mercer continue to have strong deer populations. Changes in land use in the region are reducing the amount of available habitat which is likely contributing to localized reductions to deer density.



Harvest & Survey Info	Stats
Doe : Buck Harvest Ratio	1.20
# Trips Per Deer Killed (2011)	9.2

Ozark Region (Carter, Dent, Douglas, Howell, Oregon, Ozark, Phelps, Pulaski, Ripley, Shannon, Texas, Wright)

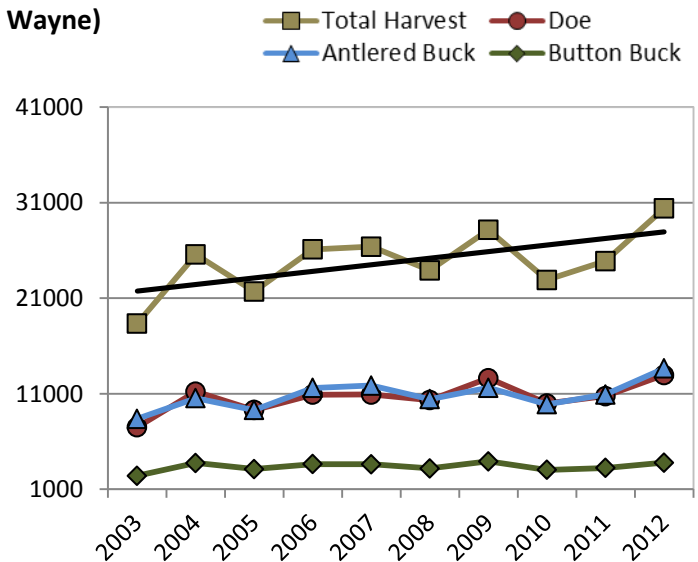
Deer populations in the Ozark Region have been slowly increasing over the last decade. A slowly increasing population and a poor acorn crop are reflected by a 22% increase in deer harvest from 2011 to 2012. Ozark counties with the greatest deer harvest increase compared to the 10-year average harvest were Pulaski, Shannon, Carter, Howell, and Ripley. Both 2010 and 2011 had relatively good acorn crops, which kept deer dispersed during the hunting season making them less vulnerable to harvest, subsequently allowing populations to increase. The past years of good acorn production also provided much needed nutrition potentially resulting in greater fawn production, which helped boost populations. Increased deer populations across the Ozarks are well accepted because deer populations remain below desirable levels.



Harvest & Survey Info	Stats
Doe : Buck Harvest Ratio	1.06
# Trips Per Deer Killed (2011)	11.1

Southeast Region (Bollinger, Butler, Cape Girardeau, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscot, Perry, Reynolds, St. Francois, Ste. Genevieve, Scott, Stoddard, Wayne)

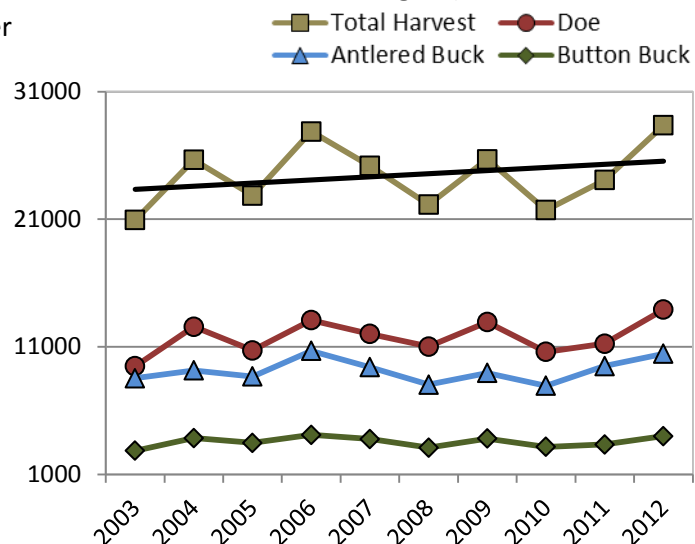
Deer populations in the Southeast Region have been slowly increasing over the last decade, which is reflected in harvest trends (see accompanying graph). Slowly increasing populations and a poor acorn crop resulted in a 22% increase in deer harvest from 2011 to 2012. The previous two years experienced good acorn production which tends to keep deer more dispersed during the hunting season and makes them less vulnerable to harvest. Populations are expected to continue slowly increasing as regulations generally remain restrictive. Increased deer populations across the Southeast Region are well accepted because in most locations populations remain below desirable levels. The Southeast Region appears to be the only Missouri region to escape significant deer mortality due to hemorrhagic disease in 2012.



Harvest & Survey Info	Stats
Doe : Buck Harvest Ratio	0.95
# Trips Per Deer Killed (2011)	14.4

St. Louis Region (Crawford, Franklin, Jefferson, Lincoln, St. Charles, St. Louis, Warren, Washington)

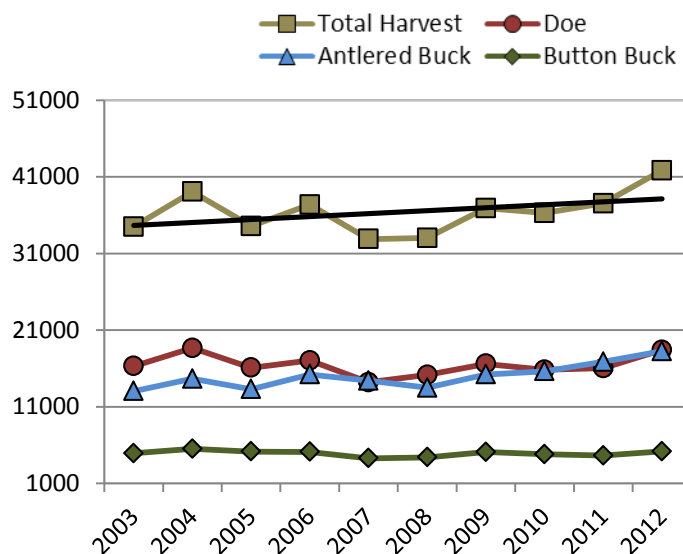
Outside of the urban areas within the St. Louis Region, deer populations have been stable or slowly increasing over the last several years. Deer harvest in the St. Louis Region in 2012 increased 18% from 2011. The increased harvest can be partially attributed to the poor acorn crop in the southern parts of the region, especially in Washington, Franklin, and Jefferson counties. The St. Louis Region did experience moderate hemorrhagic disease mortality in 2012, but was not as severe in comparison to other regions. Slowly increasing deer populations in the southern portions of the St. Louis Region is likely to lead to some liberalization of antlerless harvest and implementation of the antler-point restriction over the next few years.



Harvest & Survey Info	Stats
Doe : Buck Harvest Ratio	1.33
# Trips Per Deer Killed (2011)	12.7

Southwest Region (Barry, Barton, Cedar, Christian, Dade, Dallas, Greene, Hickory, Jasper, Laclede, Lawrence, McDonald, Newton, Polk, Stone, Taney, Webster)

Deer populations in the majority of the Southwest Region have been slowly increasing since a reduction in the availability of antlerless permits was instituted in 2008. In 2012, poor acorn production resulted in more deer sightings by hunters, resulting in an increased harvest. Thus, harvest in the Southwest Region was up 12% from 2011, but may not be completely reflective of the slowly increasing populations rather of a poor acorn crop. The greatest increase in harvest during 2012 compared to the 10-year average occurred in Stone, Dallas, Greene, and Laclede Counties. Like many other parts of the state the Southwest Region was hit hard by hemorrhagic disease in 2012. With the increased harvest and hemorrhagic mortality, we expect some areas to have reduced deer populations over the next few years. Relatively restrictive regulations across much of the region should allow populations affected by hemorrhagic disease to slowly recover. Also, in local areas where population declines are apparent, landowners and hunters should consider harvesting fewer does in 2013.



Harvest & Survey Info	Stats
Doe : Buck Harvest Ratio	1.01
# Trips Per Deer Killed (2011)	10.0

The Acorn Factor

Acorn production greatly influences deer harvest rates in areas that are dominated by forest cover because fluctuations in acorn availability can result in annual differences in movement patterns of deer. When there are fewer acorns available it causes deer to travel more and utilize other food sources, making deer more vulnerable to hunters, consequently increasing harvest. When acorns are abundant, deer are more scattered because their food source is scattered and thus they are less vulnerable. The annual variation in acorn abundance can cause dramatic swings in annual harvest totals in portions of southern Missouri. Therefore, annual changes in harvest totals are not necessarily indicative of changes in population size but largely a product of fluctuating acorn availability (i.e., more deer in the harvest doesn't necessarily mean an increased population). Because some areas may be susceptible to large fluctuations in annual harvest, we must monitor harvest trends over several years to determine if they are a result of changing annual harvest vulnerability or reflective of actual population changes.



The white oak mast crop in 2012 was the second lowest in the history of the mast survey.

The 2012-2013 deer season demonstrated the influence of acorn production on harvest totals. The overall acorn crop was the lowest on record since the first mast survey 52 years ago. The mast production index was 40% lower for red oaks and a remarkable 76% lower for white oaks in 2012 when compared to 2011. This contributed to high deer harvest totals in much of southern Missouri. When compared to 2011 the harvest during 2012 in Southeast, Ozark, St. Louis, Southwest, and Central regions increased by 22%, 22%, 18%, 12%, and 12%, respectively.

Conversely, in parts of the state where forest cover makes up a smaller proportion of the landscape deer harvest vulnerability is more consistent over time as the acorn factor has less influence. Therefore, annual harvest changes are more reflective of population size because harvest vulnerability is relatively constant over time (i.e., more deer in the harvest is reflective of an increased population) in areas like northern Missouri where forest composes a smaller proportion.

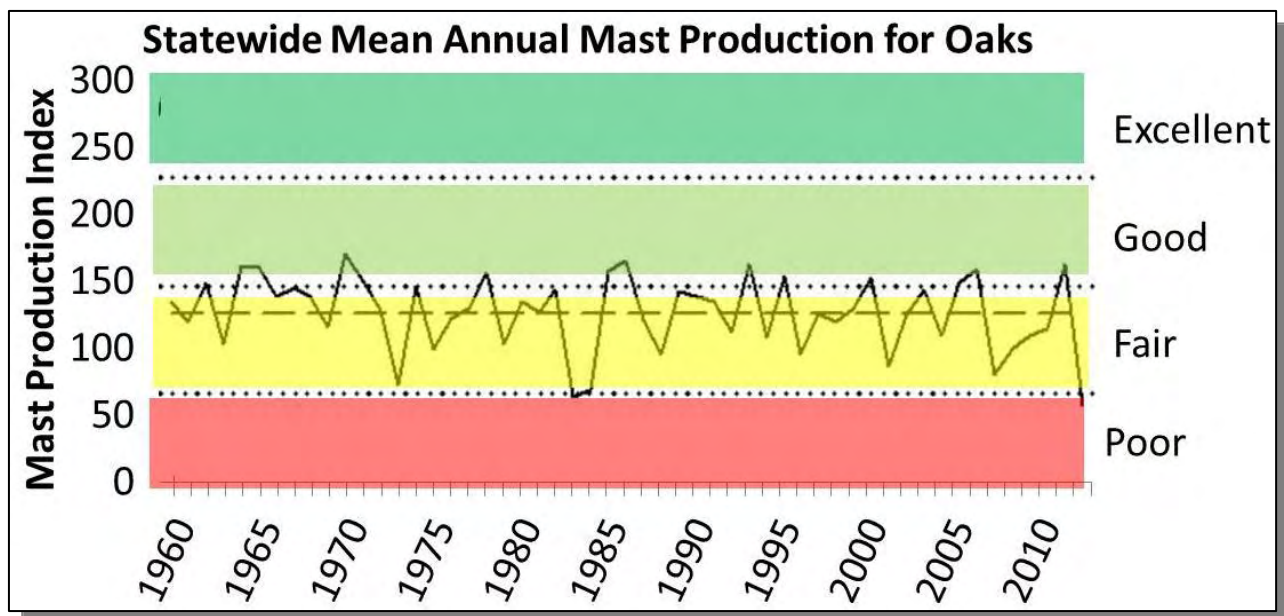


Figure 2. Figure from the 2012 MDC Oak Mast Survey Report.

Change in Harvest by County

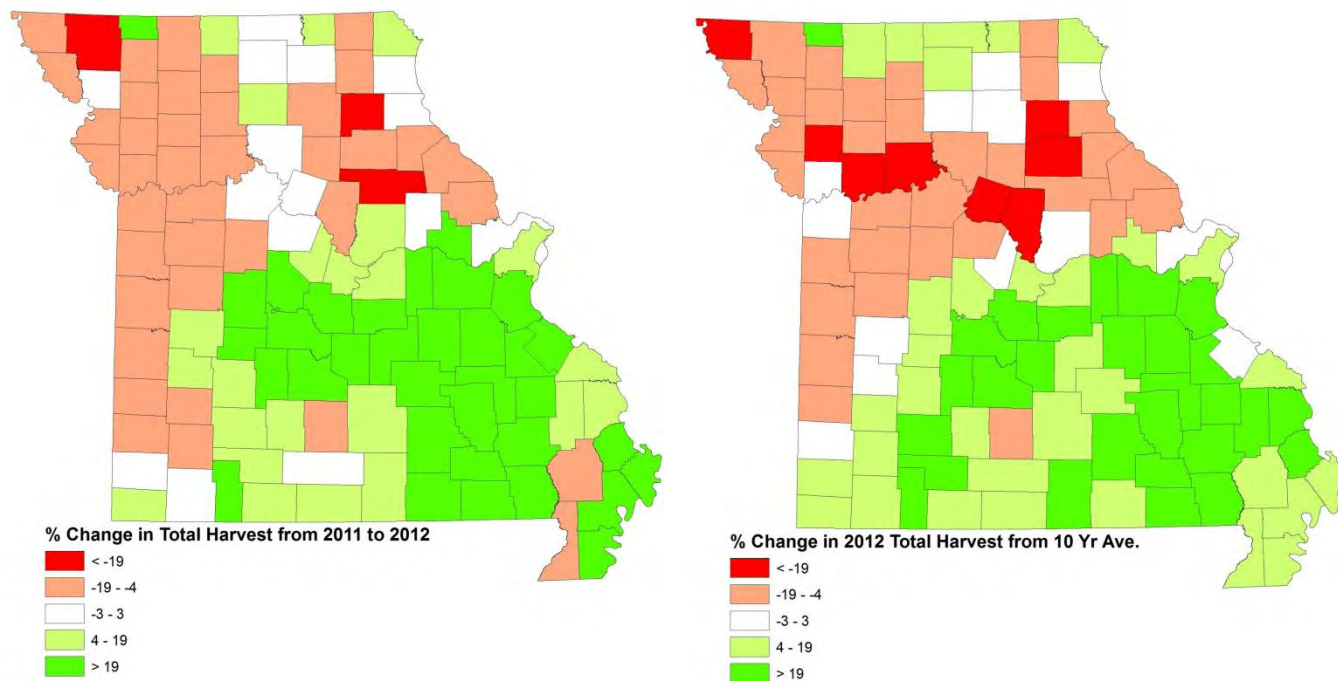


Figure 3. Percent change in total deer harvest from 2011 to 2012 and change in 2012 harvest from the 10-year average by county.

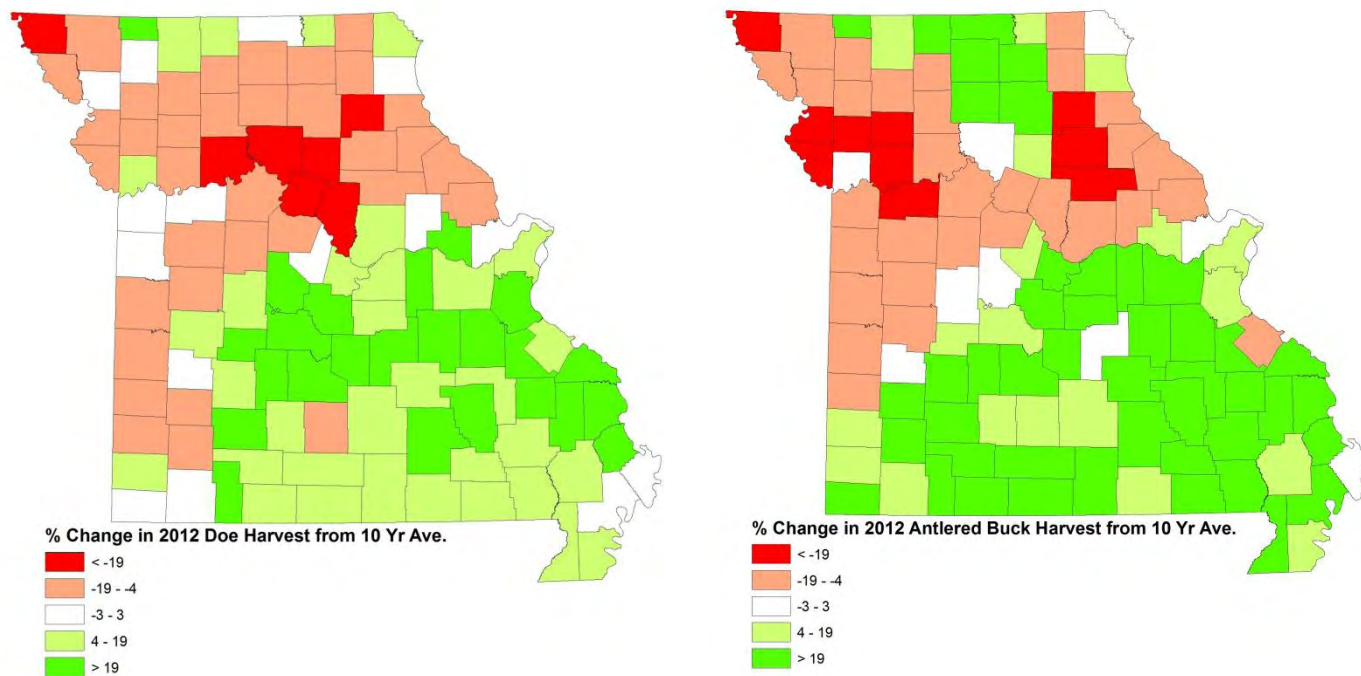


Figure 4. Percent change in 2012 doe and antlered buck harvest from the 10-year average by county.

Harvest Rates by County

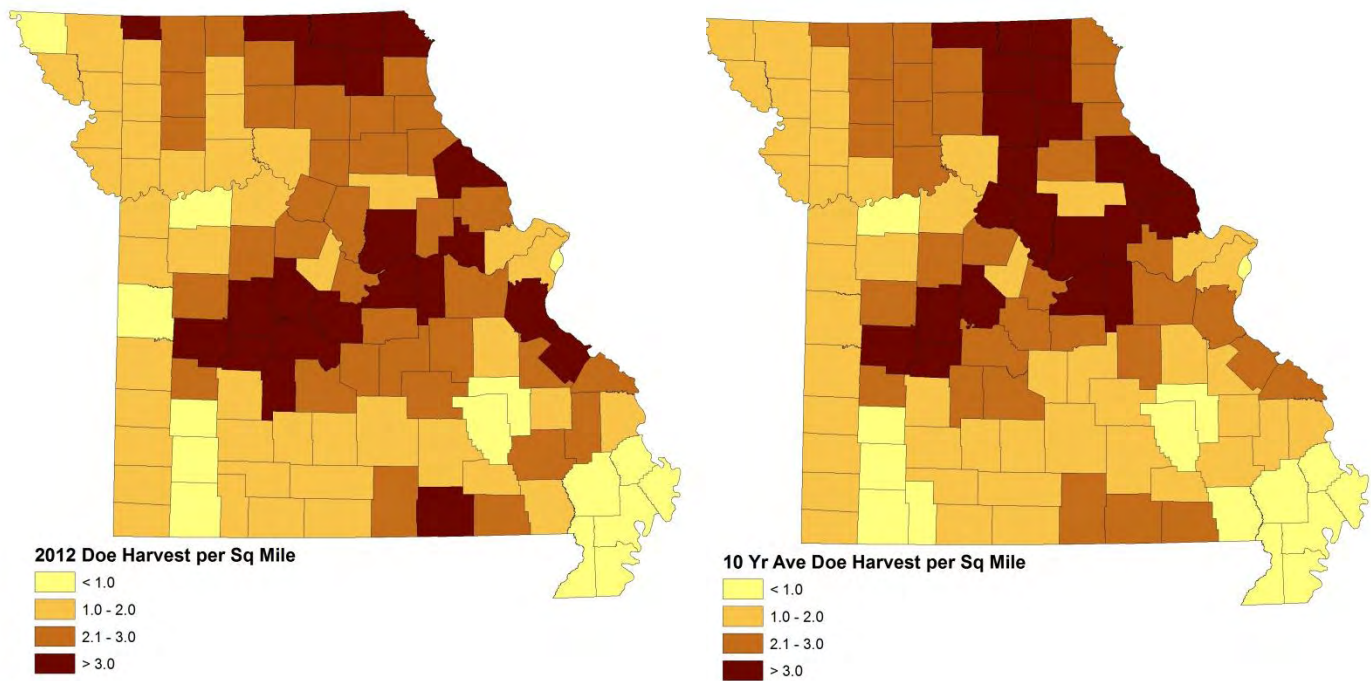


Figure 5. Doe harvest per square mile in 2012 and 10-year average. These maps illustrate decreased doe harvest rates in some northern and western counties during 2012 versus the 10-year average.

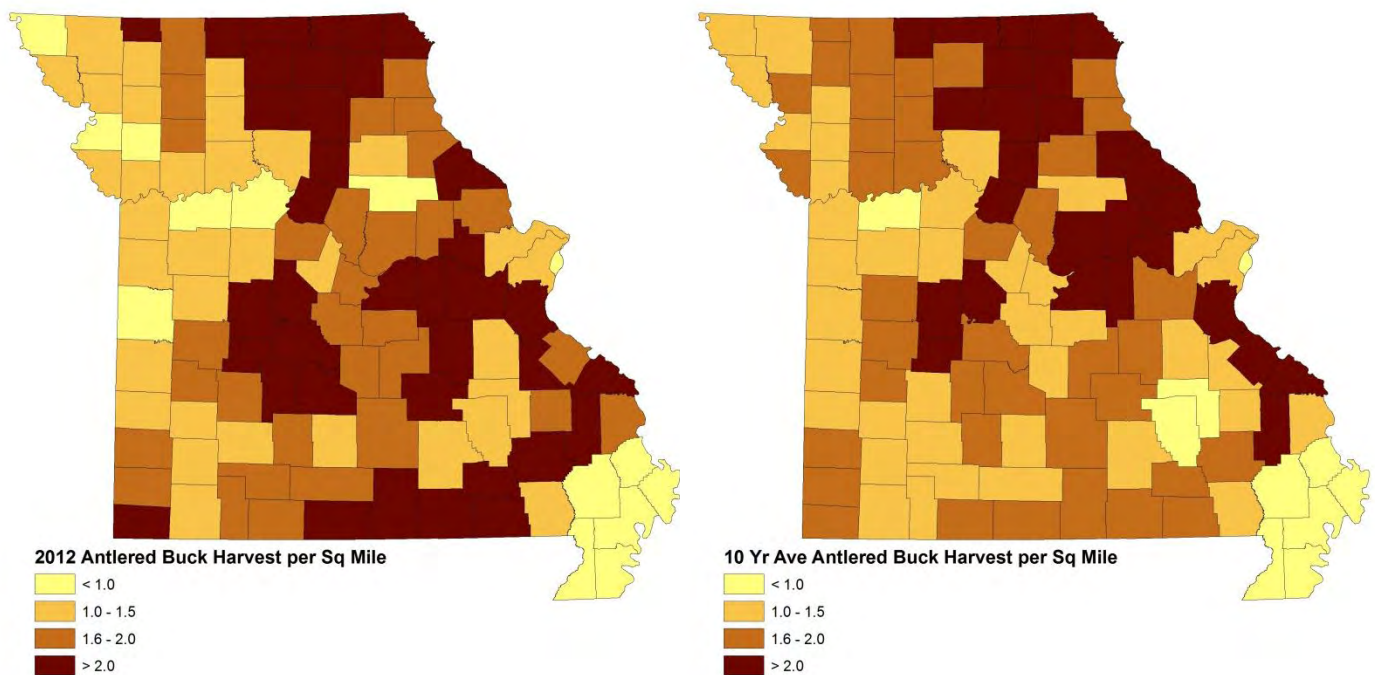


Figure 6. Antlered buck harvest per square mile in 2012 and 10-year average. Comparisons of these two maps show a higher antlered buck harvest in 2012 versus the 10-year average.

Chronic Wasting Disease

Chronic wasting disease (CWD) belongs to a group of diseases known as transmissible spongiform encephalopathies (TSEs) which cause the brain to deteriorate in cervids such as deer, elk, and moose. CWD is always fatal, but can take months or years before symptoms appear, which can include changes in behavior, extreme weight loss, excessive salivation, stumbling, and tremors. During the period between infection and clinical signs, infected cervids can spread prions by contacting other cervids and via excrements (e.g., feces, urine, and saliva) in the environment. CWD can also be spread through the natural movements of infected cervids and movement of infected captive cervids. Since infected carcasses can also spread the prion, then indirect transmission may occur through carcass movement by hunters. To determine if a cervid is CWD-positive, a laboratory test of the brain stem or lymph node tissue is required.



Salt licks and other consumable attractants cause deer to unnaturally concentrate, thus increasing the risk of disease transmission.

Current research indicates that CWD cannot be spread to domestic livestock, such as sheep or cattle. Also, the Center for Disease Control (CDC) has found no evidence that CWD can infect people. While there is no scientific evidence that CWD is transmissible to humans or animals other than deer and other cervids, health officials do not recommend the consumption of the parts (brain, spinal cord, eyes, spleen, and lymph nodes) where the prions accumulate.

CWD in Missouri Update

In January of 2012, two CWD-positive free-ranging deer were detected in Macon County through the sampling of hunter-harvested white-tailed deer. In response, MDC immediately initiated a sampling effort in February and March of 2012 within the Close Proximity Area, which was a five mile radius from the CWD-positive free-ranging deer and CWD-positive captive facility nearby, which yielded three more CWD-positive deer. Sampling continued in the fall of 2012 on hunter harvested deer resulting in an additional CWD-positive free-ranging deer. The limited distribution and prevalence indicated that the introduction of CWD to the free-ranging population in Macon County was recent. Research has shown that targeted culling can be an effective method in reducing the prevalence and spread of CWD in areas with recent introductions. Therefore, in January and February of 2013, targeted culling efforts were implemented in the CWD core area detecting four additional CWD-positive deer. In total MDC has tested more than 38,000 free-ranging deer for CWD from all Missouri counties since 2002 with 10 CWD-positive free-ranging deer detected as of March 2013, all within northwest Macon County. Additionally, there have been a total of 11 CWD-positive deer detected from captive facilities in Linn and Macon counties.

MDC implemented several management actions to help limit the spread and prevalence of the disease within the CWD Containment Zone (includes Adair, Chariton, Linn, Macon, Randolph and Sullivan counties). This included removal of the Antler-Point Restriction (APR). The reason for the regulation change is the APR protects yearling males and promotes an older age structure in bucks. Yearling and adult male deer have been found to be infected at much higher rates than yearling and adult females. The dispersal of yearling males from their birth area in search of new territory is also one of the primary means of CWD spread across the landscape. Therefore, removing the APR and allowing hunters to harvest young males may help limit the spread of CWD. Additionally, activities that artificially concentrate deer such as feeding and placement of minerals, increases the likelihood of disease transmission from animal to animal or soil to animal. As a result, the placement of grain, salt products, minerals and other consumable natural or manufactured products in the CWD Containment Zone was also prohibited.

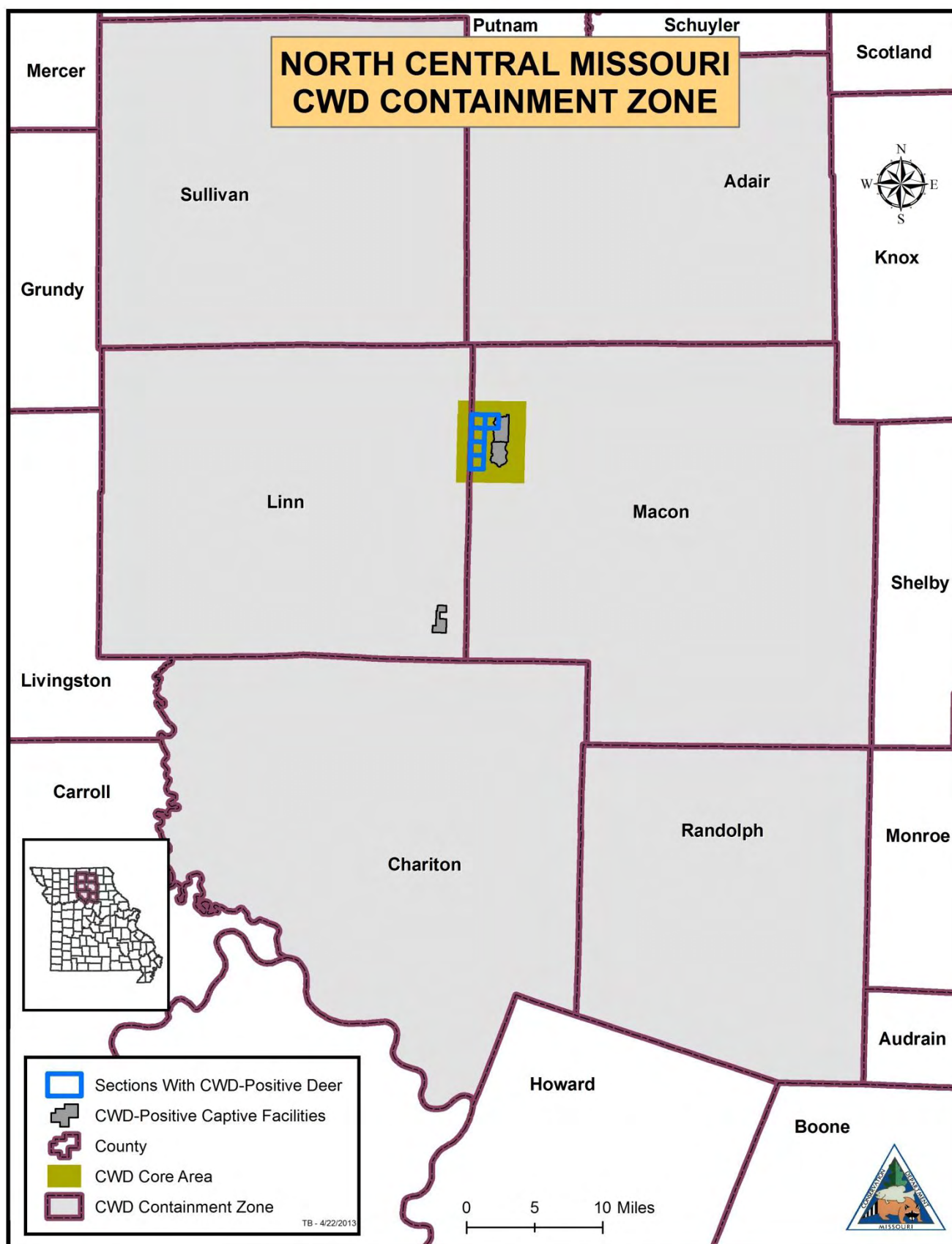


Figure 7. CWD Containment Zone, Core Area, and sections where free-ranging CWD-positive deer have been detected as of March 2013.

Hemorrhagic Disease

Suspected cases of hemorrhagic disease (HD), which includes both the EHD and bluetongue viruses, were present in all Missouri counties during the summer and fall of 2012. This disease is caused by a virus spread by midges, or biting “no-see-um” flies and is completely unrelated to chronic wasting disease (CWD) as described on pages 11-12. Most deer infected with HD in Missouri die within two weeks. Once infected, but before death, deer may exhibit the following symptoms: disoriented, lack of natural fear of humans, foaming at the mouth and/or nose, high fever, and swollen jaw. While a small portion of Missouri deer survive the HD virus, they may die weeks to months later due to secondary infections. An even smaller portion of deer can survive HD completely with the only residual symptom being sloughed hooves, often noticed during the hunting season. These viruses do not affect humans or non-ruminant animals like dogs and cats. While infrequent, HD viruses can infect and cause symptoms in some domestic livestock species, including cattle and sheep.

The record drought and heat during the summer of 2012 likely intensified the HD outbreak. The midges that carry the virus breed around mud flats, which become more prevalent during hot, dry summers. Additionally, deer visit these increasingly diminishing water sources more frequently during these extreme conditions, increasing their potential exposure to the midges. Once infected, deer often develop a high fever and seek out water sources, often dying in close proximity to water. Deer that die due to HD do not pose a threat to the further spread of HD as the virus is typically only viable for less than 24 hours in the deceased host.

Even though all Missouri counties had suspected cases of HD reported, this doesn’t mean that it had the same effect statewide.

HD outbreaks are often localized in nature, meaning they can significantly affect a small area, but another area within the same county might not have any effects. The map on the following page indicates the number of suspected HD cases that were reported to MDC staff. It is important to understand that just because a county shows a high or low number of reports, those reports may not be indicative of every area within that county. Therefore, if landowners and hunters notice a decline in deer sightings or found carcasses typical of HD, then they should consider harvesting fewer does to allow the population to recover.



Foaming at the mouth and nose is a typical symptom of hemorrhagic disease.



Deer infected with HD are often uncoordinated, therefore are unable to stand or walk.



Often noticed by hunters, sloughed hooves are a classic residual symptom of hemorrhagic disease.

Suspected Hemorrhagic Disease Cases by County

Total = 10,177

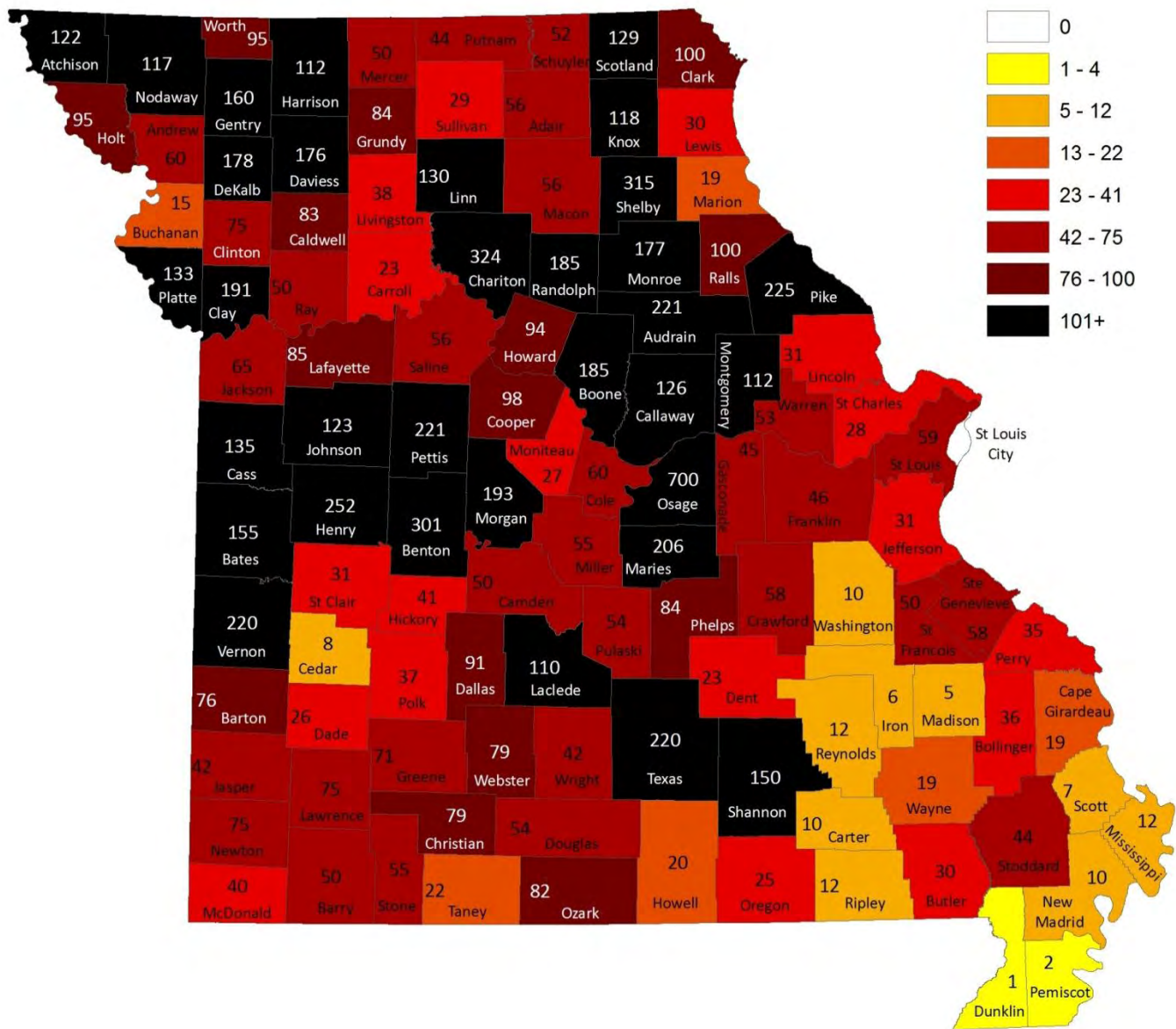


Figure 8. Map of suspected hemorrhagic disease cases reported to MDC during 2012.

2012-2013 Deer Season General Information

Season Dates:

Archery Season: September 15 through January 15, closed during the November portion of the firearms deer season

Firearms Season:

Urban Portion: October 5 - 8

Youth Portion: November 3 - 4; December 29 – 30

November Portion: November 10 - 20

Antlerless Portion: November 21 - December 2

Alternative Methods Portion: December 15 - 25

Bag Limit:

Archery Deer: Archery Deer Hunting permits allows \ the taking of two deer of either sex, except that only one antlered deer may be taken before the November portion of the firearms season. Unlimited numbers of additional antlerless deer may be taken on Archery Antlerless Deer Hunting Permits in selected counties.

Firearms Deer: Firearms Any-Deer and Antlerless Permits were sold over-the-counter in unlimited quantities. An Any-Deer Permit was valid for one deer of either sex in any county designated for their use. A Firearms Antlerless Permit was valid for one antlerless deer of either sex in any county. An unlimited number of Firearms Antlerless Permits could be filled in 74 counties (only the urban portion of 3 of these counties), one could be filled in 29 counties (only the rural portion of 3 of these counties) and none could be filled in 14 counties.

Harvest Reporting: Successful hunters are required to report their harvest by 10PM of the day of harvest using Telecheck (telephone or internet).

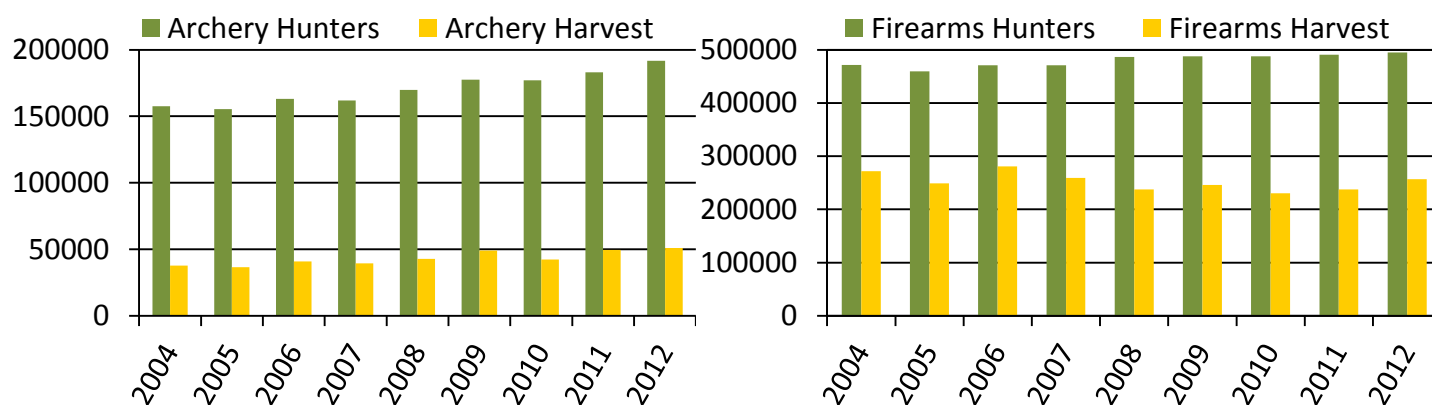


Figure 9. Trends in the number of individuals holding an archery and firearms deer hunting permit and harvest.

Archery Deer Season Summary

The 2012 archery season yielded a record harvest in Missouri of 51,008 deer, breaking the former record archery harvest in 2011 by 3%. This record harvest included 27,296 does, 6,275 button bucks, and 17,437 antlered bucks (Table 1). Sale of youth archery permits increased by 10% to 7,057 and youth archery antlerless permits increased by 21% to 2,191 (Table 2). Total individuals possessing an archery deer permit in 2012 was 191,753 (Table 3), which is an 8% increase from 2010 and a 5% increase from 2011. The increase in harvest is a result of long-term increases in archery hunting participation and 2012's poor acorn crop. Limited availability of acorns causes deer to search for other food sources, thus increasing deer sightings by hunters and their vulnerability to harvest (see page 8 to learn more).

Firearms Deer Season Summary

The 2012 deer season broke a two-year trend of declining firearms any-deer and antlerless permits purchases, with firearms any-deer permits remaining relatively stable and firearms antlerless permits increasing by 2% (Table 2).

Resident firearms hunters obtained a total of 907,537 permits, up 1% from 2011's total of 899,020 permits. Nonresident firearms hunters purchased a total of 29,159 permits, up 3% from 2011 (Table 2). The total number of individuals possessing a firearms deer hunting permit has increased 1% annually the past couple years, and in 2012 that trend continued as 495,182 individuals possessed a firearms deer hunting permit (Table 3).

Deer harvest during the 2012 firearms season totaled 256,971 an 8% increase from 2011 (Table 1). Of the total, 118,842 were does, a 10% increase from 2011; 35,513 were button bucks, a 7% increase; and 102,616 were antlered bucks, a 7% increase. During 2012, resident and non-resident hunters accounted for 95% and 5% of the total firearms harvest, respectively (Table 2). When compared to the 2011 season, harvest decreased in Northwest, Northeast, and Kansas City regions by 4-6%. However, harvest increased in all other regions of Missouri (Central, Southeast, Southwest, and St. Louis) by 12-24% (refer to pages 3-7 for more regional trend information).

During the 2012 season, youth continued a long term trend of increased participation as shown by a 4% and 6% increase in any-deer and antlerless permits, respectively. Increased participation combined with a poor acorn crop and placement of the youth portion during the first weekend in November led to a 19% increase from 2011 during the early youth season. The harvest total of both youth portions (early and late combined) consisted of 11,791 antlered bucks, 2,762 button bucks, and 7,171 does, totaling 21,724 deer (Table 1).

The 2012 urban portion harvest increased by 95% from 2011, totaling 1,110 deer harvested. However, the urban portion harvest has been variable for the past several years with harvest totaling 1,457 in 2009, 586 in 2010, and 570 in 2011. The 2012 harvest increase is likely a result of the urban portion being greatly affected by temperature, with cooler conditions resulting in increased participation and harvest.

The 2012 antlerless portion harvest totaled 15,128, which was a 5% increase from 2011, 2% decrease from 2010, and a 32% decrease from 2009.

The 2012 alternative methods portion (formally the muzzleloader portion) harvest total was 14,936, a 2% decrease from 2011. The decline in harvest during the alternative methods portion would indicate that, as expected, the increase in methods available for hunters to utilize during this portion did not produce a significant increase in participation or harvest. The alternative methods portion consisted of 3,565 antlered bucks, 2,264 button bucks, and 9,107 does, a 5%, 2%, and -5% changes from 2011, respectively.

Managed Deer Hunt Summary

Overall, hunters harvested 1,950 deer during the managed deer hunts in 2012, which is 150 greater or 8 % increase from 2011. This increase in harvest was a result of 15% more antlered bucks and 22% more button bucks being harvested in 2012 than 2011.

2012-13 Deer Harvest Composition by Season & Portion

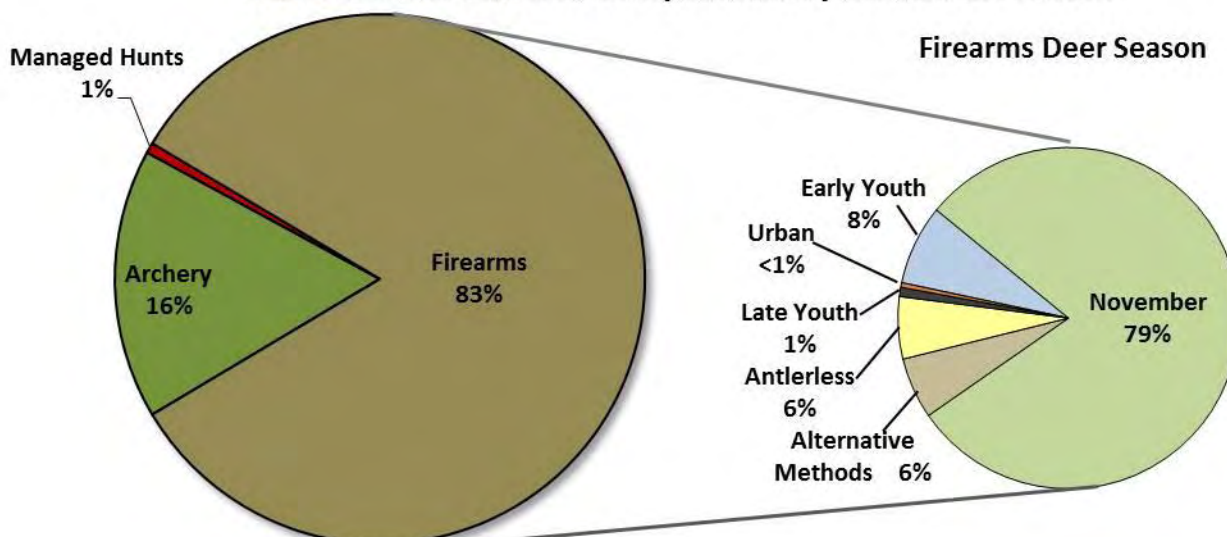


Figure 10. 2012-13 Composition of total deer harvest by seasons and firearms season composed by portion totals.

Table 1. 2011 & 2012 Deer Season Harvest Comparison

Hunting Portion	Antlered Deer			Button Bucks			Does			Total		
	2011	2012	% Diff	2011	2012	% Diff.	2011	2012	% Diff.	2011	2012	% Diff.
Archery	17,818	17,437	-2	5,863	6,275	7	25,849	27,296	6	49,530	51,008	3
Urban	5	8	60	96	195	103	469	907	93	570	1,110	95
Early Youth	10,258	11,308	10	1,881	2,377	26	4,299	5,806	35	16,438	19,491	19
November	81,468	87,039	7	25,892	27,069	5	81,045	89,879	11	188,405	203,987	8
Alt. Methods	3,400	3,565	5	2,209	2,264	2	9,626	9,107	-5	15,235	14,936	-2
Antlerless	153	149	-3	2,857	3,217	13	11,410	11,762	3	14,420	15,128	5
Managed Hunts	431	496	15	304	370	22	1065	1084	2	1800	1,950	8
Late Youth	498	483	-3	370	385	4	1,328	1,365	3	2,196	2,233	2
CWD Seals*	n/a	64	n/a	n/a	6	n/a	n/a	16	n/a	n/a	86	n/a
Total Firearms	95,782	102,616	7	33,305	35,513	7	108,177	118,842	10	237,264	256,971	8
Total	114,031	120,549	6	39,472	42,158	7	135,091	147,222	9	288,594	309,929	7

Table 2. Summary of Permit Sales and Harvest by Permit Type

Permit Type	Number of Permits			Number of Deer Harvested		
	2011	2012	% Diff.	2011	2012	% Diff.
Permittee Archery	104,160	109,152	5	21,241	21,172	0
Landowner Archery	82,347	86,212	5	6,311	6,707	6
Youth Archery	6,431	7,057	10	838	942	12
Permittee Archery Antlerless	49,132	52,472	7	14,933	15,413	3
Landowner Archery Antlerless	133,844	141,507	6	5,657	6,227	10
Youth Archery Antlerless	1,817	2,191	21	324	410	27
Permittee Firearms Any-Deer	291,890	293,098	0	71,572	76,655	7
Landowner Firearms Any-Deer	178,975	181,322	1	37,676	41,908	11
Youth Firearms Any-Deer	55,046	57,519	4	18,268	20,480	12
Permittee Firearms Antlerless	219,676	223,111	2	73,243	78,134	7
Landowner Firearms Antlerless	157,624	156,174	-1	29,002	30,789	6
Youth Firearms Antlerless	23,922	25,472	6	7,268	8,451	16
Resident Firearms	899,020	907,537	1	225,404	244,100	8
Nonresident Firearms	28,445	29,159	3	11,569	12,317	6
Resident Archery	360,109	388,119	8	45,887	47,539	4
Nonresident Archery	9,844	10,472	6	3,391	3,332	-2
Permittee Archery & Firearms	752,074	770,072	2	207,632	221,657	7
Landowner Archery & Firearms	552,790	565,215	2	78,619	85,631	9

* CWD Management Seals are part of the MDC's management plan to limit the spread of CWD. CWD Seals were distributed to landowners who own 5 acres or more in the CWD Core Area (29 square mile area in Linn and Macon counties), which permit the harvest of one deer of either sex on the specific property for which it was issued.

Table 3. Deer Permittee and Harvest Facts

	Archery	Firearms	Archery & Firearms Combined
Resident permits ¹	109,967	350,404	460,371
Non-resident permits ¹	8,412	18,875	27,287
Landowner permits ¹	87,411	181,139	268,550
Total permittees ²	191,753	495,182	517,618 ³
Age distribution of hunters:			
10 or younger	1,817	23,871	-
11-15	11,351	50,638	-
16-40	84,598	182,590	-
41 or older	93,987	238,083	-
Antlerless permit sales:			
1	28,675	151,084	179,759
2	7,657	28,909	36,566
3	1,654	6,585	8,239
4 or more	1,199	4,240	5,439
Number of deer taken:			
0	154,113	299,741	303,772 ⁴
1	28,573	150,010	152,147 ⁴
2	6,549	35,173	42,946 ⁴
3	1,612	7,250	11,865 ⁴
4 or more	906	3,008	6,888 ⁴
Number of antlered deer taken:			
0	175,030	393,711	404,362 ⁴
1	16,072	100,589	107,085 ⁴
2	645	851	5,838 ⁴
3	6	31	333 ⁴
Percentage taking:			
1 or more deer	19.63	39.47	41.31 ⁴
1 deer	14.9	30.29	29.39 ⁴
2 deer	3.42	7.1	8.3 ⁴
3 or more deer	1.31	2.07	3.62 ⁴
Percentage taking:			
1 antlered buck	8.38	20.31	20.69 ⁴
2 antlered bucks	0.34	0.17	1.13 ⁴
3 or more antlered bucks	0.0	0.0	0.06 ⁴
Percentage of deer taken by nonresidents	6.5	4.8	5.1
Percentage of deer taken by landowners	25.4	28.4	27.9

¹ Number of any-deer permits issued² Number of individuals possessing a permit, not number of permits issued³ Number of individuals that held an archery and/or firearms permit⁴ Number of individuals that harvested the specified number when combining their archery and firearms harvest

Table 4. Archery and Firearms Harvest Totals for the 2012-13 Missouri Deer Season.

County	Archery				Firearms				Totals			
	Antlered Buck	Button Buck	Doe	Total	Antlered Buck	Button Buck	Doe	Total	Antlered Buck	Button Buck	Doe	Total
Adair	256	70	351	677	1377	433	1407	3217	1633	503	1758	3894
Andrew	83	23	108	214	526	225	668	1419	609	248	776	1633
Atchison	77	17	84	178	304	126	381	811	381	143	465	989
Audrain	68	39	167	274	562	334	785	1681	630	373	952	1955
Barry	176	61	170	407	886	200	651	1737	1062	261	821	2144
Barton	90	36	161	287	623	162	627	1412	713	198	788	1699
Bates	81	21	114	216	640	242	788	1670	721	263	902	1886
Benton	216	91	434	741	1463	677	2635	4775	1679	768	3069	5516
Bollinger	233	105	379	717	1487	382	1204	3073	1720	487	1583	3790
Boone	199	103	377	679	917	366	1292	2575	1116	469	1669	3254
Buchanan	51	15	74	140	335	125	441	901	386	140	515	1041
Butler	200	69	221	490	881	207	657	1745	1081	276	878	2235
Caldwell	53	17	99	169	604	214	747	1565	657	231	846	1734
Callaway	238	136	498	872	1406	719	2357	4482	1644	855	2855	5354
Camden	280	107	602	989	1307	667	2417	4391	1587	774	3019	5380
Cape Girardeau	155	65	251	471	971	190	676	1837	1126	255	927	2308
Carroll	111	38	169	318	919	262	931	2112	1030	300	1100	2430
Carter	209	51	206	466	996	207	627	1830	1205	258	833	2296
Cass	114	46	172	332	660	210	761	1631	774	256	933	1963
Cedar	115	33	171	319	801	306	1135	2242	916	339	1306	2561
Chariton	150	32	134	316	978	253	832	2063	1128	285	966	2379
Christian	167	63	210	440	747	179	622	1548	914	242	832	1988
Clark	180	51	232	463	916	402	1299	2617	1096	453	1531	3080
Clay	184	82	330	596	416	98	380	894	600	180	710	1490
Clinton	34	17	94	145	358	151	473	982	392	168	567	1127
Cole	89	27	157	273	582	221	776	1579	671	248	933	1852
Cooper	130	39	219	388	768	282	1124	2174	898	321	1343	2562
Crawford	257	96	371	724	1554	431	1493	3478	1811	527	1864	4202
Dade	82	18	97	197	606	139	417	1162	688	157	514	1359
Dallas	208	70	261	539	1273	509	1597	3379	1481	579	1858	3918
Daviess	102	35	199	336	779	355	1065	2199	881	390	1264	2535
Dekalb	45	22	76	143	458	235	591	1284	503	257	667	1427

Table 4. Continued.

County	Archery				Firearms				Totals			
	Antlered Buck	Button Buck	Doe	Total	Antlered Buck	Button Buck	Doe	Total	Antlered Buck	Button Buck	Doe	Total
Dent	184	78	239	501	1335	379	1427	3141	1519	457	1666	3642
Douglas	172	44	209	425	1188	286	889	2363	1360	330	1098	2788
Dunklin	42	6	34	82	165	33	103	301	207	39	137	383
Franklin	281	131	583	995	1798	677	2091	4566	2079	808	2674	5561
Gasconade	177	89	369	635	1328	571	1962	3861	1505	660	2331	4496
Gentry	77	19	95	191	612	269	823	1704	689	288	918	1895
Greene	228	72	296	596	799	247	922	1968	1027	319	1218	2564
Grundy	76	24	128	228	571	185	706	1462	647	209	834	1690
Harrison	207	42	256	505	1165	407	1314	2886	1372	449	1570	3391
Henry	98	56	233	387	862	512	1487	2861	960	568	1720	3248
Hickory	114	49	229	392	949	440	1608	2997	1063	489	1837	3389
Holt	65	22	112	199	519	137	544	1200	584	159	656	1399
Howard	133	40	207	380	875	254	960	2089	1008	294	1167	2469
Howell	342	84	381	807	1856	639	2270	4765	2198	723	2651	5572
Iron	71	22	80	173	633	151	388	1172	704	173	468	1345
Jackson	308	119	464	891	395	130	451	976	703	249	915	1867
Jasper	209	35	225	469	993	155	592	1740	1202	190	817	2209
Jefferson	295	142	726	1163	1181	488	1606	3275	1476	630	2332	4438
Johnson	104	45	224	373	810	299	994	2103	914	344	1218	2476
Knox	177	72	266	515	901	492	1327	2720	1078	564	1593	3235
Laclede	210	88	319	617	1496	630	1765	3891	1706	718	2084	4508
Lafayette	43	32	100	175	358	178	573	1109	401	210	673	1284
Lawrence	126	35	140	301	637	148	452	1237	763	183	592	1538
Lewis	95	33	193	321	874	341	1063	2278	969	374	1256	2599
Lincoln	164	89	394	647	1087	492	1453	3032	1251	581	1847	3679
Linn	246	51	297	594	1383	297	1262	2942	1629	348	1559	3536
Livingston	111	49	175	335	676	257	863	1796	787	306	1038	2131
Macon	281	94	362	737	1891	580	1675	4146	2172	674	2037	4883
Madison	108	47	177	332	858	168	547	1573	966	215	724	1905
Maries	125	55	233	413	919	350	1108	2377	1044	405	1341	2790
Marion	118	38	170	326	693	314	948	1955	811	352	1118	2281
McDonald	179	22	147	348	941	148	636	1725	1120	170	783	2073
Mercer	193	39	273	505	937	275	1030	2242	1130	314	1303	2747

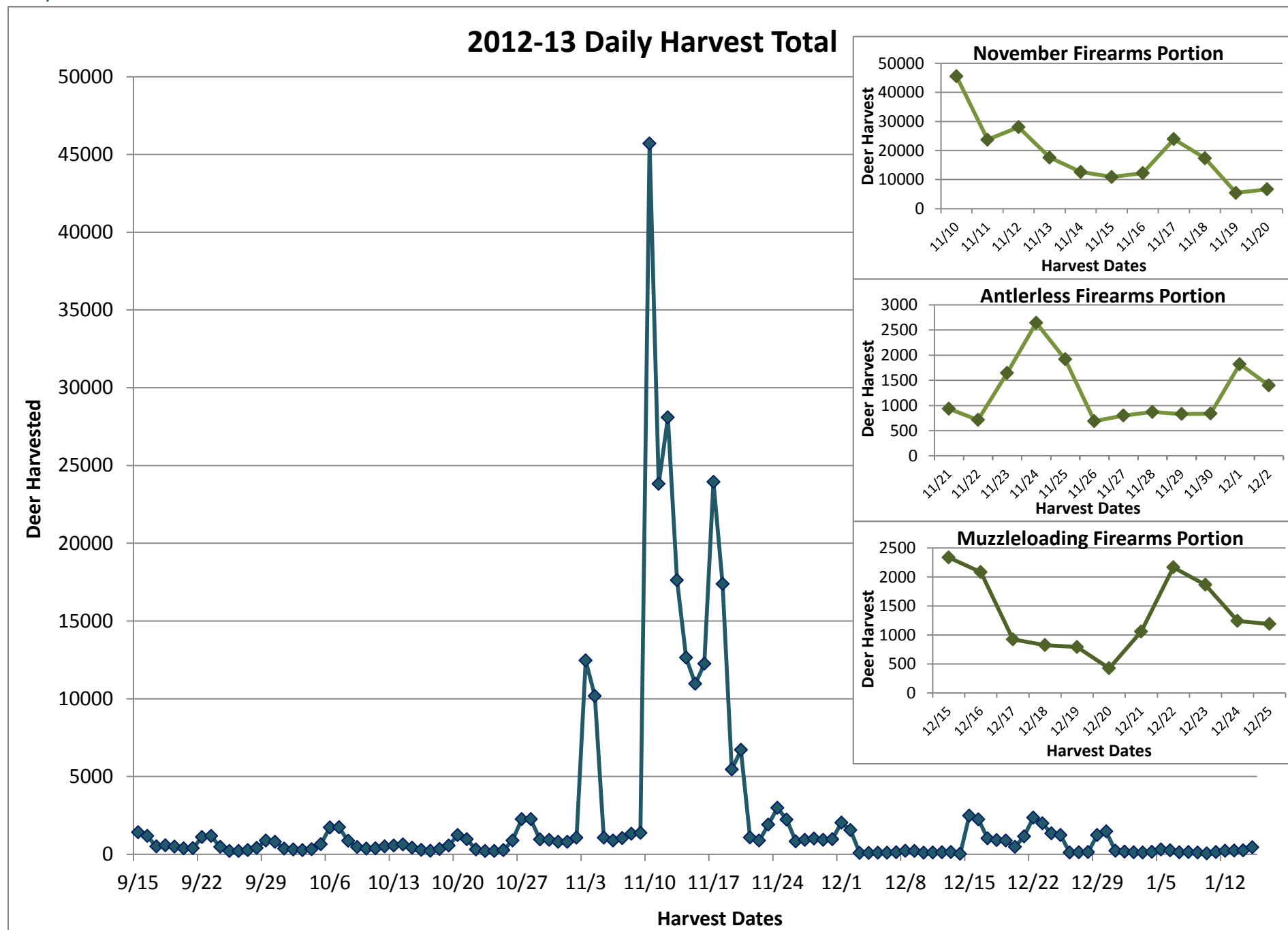
Table 4. Continued.

County	Archery				Firearms				Totals			
	Antlered Buck	Button Buck	Doe	Total	Antlered Buck	Button Buck	Doe	Total	Antlered Buck	Button Buck	Doe	Total
Miller	167	72	322	561	964	552	1662	3178	1131	624	1984	3739
Mississippi	16	7	22	45	165	24	79	268	181	31	101	313
Moniteau	67	26	102	195	571	225	697	1493	638	251	799	1688
Monroe	102	69	229	400	813	500	1319	2632	915	569	1548	3032
Montgomery	111	59	243	413	912	435	1340	2687	1023	494	1583	3100
Morgan	218	87	431	736	1190	661	2355	4206	1408	748	2786	4942
New Madrid	27	6	38	71	205	23	72	300	232	29	110	371
Newton	236	42	204	482	906	157	701	1764	1142	199	905	2246
Nodaway	176	35	199	410	880	288	1022	2190	1056	323	1221	2600
Oregon	243	83	369	695	1426	538	2062	4026	1669	621	2431	4721
Osage	215	85	418	718	1448	592	2062	4102	1663	677	2480	4820
Ozark	204	56	216	476	1445	237	1066	2748	1649	293	1282	3224
Pemiscot	16	5	10	31	72	16	45	133	88	21	55	164
Perry	102	38	205	345	1082	310	1212	2604	1184	348	1417	2949
Pettis	115	39	182	336	728	318	1178	2224	843	357	1360	2560
Phelps	172	89	321	582	926	368	1268	2562	1098	457	1589	3144
Pike	173	90	371	634	1310	606	1789	3705	1483	696	2160	4339
Platte	115	57	295	467	392	142	416	950	507	199	711	1417
Polk	142	41	183	366	1080	223	733	2036	1222	264	916	2402
Pulaski	149	84	275	508	741	294	883	1918	890	378	1158	2426
Putnam	270	42	333	645	1138	282	1246	2666	1408	324	1579	3311
Ralls	110	37	197	344	730	342	998	2070	840	379	1195	2414
Randolph	137	54	191	382	963	299	923	2185	1100	353	1114	2567
Ray	64	21	129	214	611	221	761	1593	675	242	890	1807
Reynolds	111	30	118	259	939	224	665	1828	1050	254	783	2087
Ripley	262	93	286	641	1348	398	1386	3132	1610	491	1672	3773
Saint Charles	209	61	333	603	677	235	793	1705	886	296	1126	2308
Saint Clair	146	71	331	548	1078	535	1868	3481	1224	606	2199	4029
Saint Francois	128	76	255	459	865	242	814	1921	993	318	1069	2380
Saint Louis	360	142	591	1093	360	120	447	927	720	262	1038	2020
Sainte Genevieve	82	45	309	436	815	331	1404	2550	897	376	1713	2986
Saline	75	37	167	279	638	249	846	1733	713	286	1013	2012
Schuyler	115	33	146	294	615	283	837	1735	730	316	983	2029

Table 4. Continued.

County	Archery				Firearms				Totals			
	Antlered Buck	Button Buck	Doe	Total	Antlered Buck	Button Buck	Doe	Total	Antlered Buck	Button Buck	Doe	Total
Scotland	194	67	263	524	966	416	1415	2797	1160	483	1678	3321
Scott	36	13	51	100	290	48	211	549	326	61	262	649
Shannon	147	52	199	398	1274	332	1141	2747	1421	384	1340	3145
Shelby	158	52	247	457	821	427	1199	2447	979	479	1446	2904
Stoddard	198	67	239	504	631	180	575	1386	829	247	814	1890
Stone	132	38	146	316	664	130	523	1317	796	168	669	1633
Sullivan	231	36	279	546	1398	294	1351	3043	1629	330	1630	3589
Taney	198	43	224	465	1133	238	876	2247	1331	281	1100	2712
Texas	266	88	356	710	2081	506	1917	4504	2347	594	2273	5214
Vernon	105	65	258	428	733	391	1197	2321	838	456	1455	2749
Warren	130	61	233	424	732	361	1129	2222	862	422	1362	2646
Washington	141	62	235	438	1059	331	1125	2515	1200	393	1360	2953
Wayne	282	139	504	925	1852	536	1461	3849	2134	675	1965	4774
Webster	172	53	210	435	942	278	899	2119	1114	331	1109	2554
Worth	103	17	123	243	409	116	414	939	512	133	537	1182
Wright	117	52	184	353	813	221	765	1799	930	273	949	2152
Northwest	2024	535	2824	5383	13024	4398	14868	32290	15048	4933	17692	37673
Northeast	2597	838	3830	7265	15406	6011	18796	40213	18003	6849	22626	47478
Kansas City	1629	724	3137	5490	8535	3732	12728	24995	10164	4456	15865	30485
Central	2292	1001	4512	7805	14387	6478	21743	42608	16679	7479	26255	50413
St. Louis	1837	784	3466	6087	8448	3135	10137	21720	10285	3919	13603	27807
Southwest	2784	799	3393	6976	15476	4289	14756	34521	18260	5088	18149	41497
Ozark	2467	854	3241	6562	15429	4405	15701	35535	17896	5259	18942	42097
Southeast	1807	740	2893	5440	11911	3065	10113	25089	13718	3805	13006	30529
GRAND TOTAL	17437	6275	27296	51008	102616	35513	118842	256971	120053	41788	146138	307979

Daily Harvest Totals for 2012 Deer Season



Deer Management Information & Assistance

Quality Deer Management Cooperatives

Quality Deer Management (QDM) Cooperatives are not a new concept. However, they are gaining momentum in Missouri. A QDM Cooperative is a group of landowners or hunters willing to work together to improve the quality of the deer herd and hunting. Cooperatives range are of various geographical shapes and sizes, number of participants, and structure based on the objectives established by the members.

Establishing a QDM Cooperative is easy. The first step is identifying the potential area. Typically, this is centered on a group of landowners or hunters already interested in QDM. Next, plan an organizational meeting.

The date, time, and location are all important and should be accommodating to potential members. Key points for the organizational meeting include identifying the cooperative's purpose as well as individuals willing to take on leadership roles within the cooperative.



Public deer workshop near Jamesport

Once a QDM Cooperative is established, follow-up meetings are necessary to maintain effective communication among its members. This will also allow for other potential members to gain insight into the goals and objectives of the cooperative. In addition, the meetings can be informational by inviting a state biologist, forester, or private wildlife biologist.

If you are interested in forming a QDM Cooperative or would like to learn more, feel free to contact QDMA/MDC Cooperative Specialist, Brian Towe at 573/397-1664 or btowe@qdma.com.

Deer Information for Hunters & Landowners

The University of Missouri (MU) Extension and Missouri Department of Conservation are collaborating on a publication series devoted solely to deer management. This information is intended for landowners, hunters, and wildlife enthusiasts that want to learn more about deer and managing deer in Missouri.



The publication series includes a wide variety of science-based deer information that will help landowners and hunters better manage deer. Several publications explain how to obtain population information, such as sex ratio, density, fawn recruitment, and age structure. Topics also include information on deer biology, including antler growth, ecology, and aging deer “on the hoof” and by jawbones.

These publications are free to the public and available on MU Extension's website (<http://extension.missouri.edu/deer>). As of March 2013, there are 13 publications available with several habitat focused publications being added in the near future.



Missouri Department of Conservation